

DRAFT Terms of Reference for Technical Peer Review of the NCRPP Industry Based Survey (IBS) Program

1. **Design and Execution.** The review panel should evaluate the statistical and scientific validity of the two survey designs relative to the program goals and objectives, highlighting strengths, weaknesses, and potential biases. In particular:
 - a. evaluate the temporal and spatial design elements relative to survey objectives,
 - b. evaluate random versus industry selected sample stations,
 - c. evaluate the estimation of survey area as it relates to absolute biomass estimates and the validity of such estimates,
 - d. evaluate sampling protocols, sub-sampling procedures and onboard processing of biological materials and total catch, and
 - e. evaluate data post-processing procedures and archival policy.
2. **Data Utility.** The review panel should evaluate the surveys' utility in assessing:
 - a. the efficacy of fishery closure areas,
 - b. stock abundance,
 - c. migratory or movement patterns,
 - d. reproductive demographics,
 - e. and other biological characteristics such as age and growth parameters.
3. **Consistency.** The review panel should evaluate the consistency and comparability among temporal and spatial sampling frames in relation to field procedures, gear selection and maintenance, vessel comparability, data acquisition, and analysis.
4. **Quantitative Analysis.** The review panel should evaluate quantitative analysis techniques, measures of statistical precision, and recommend design or analytical processes that will improve the utility of existing survey data.
5. **Cost Effectiveness.** The review panel should compare the cost effectiveness of the IBS program relative to the costs of the NEFSC Bottom Trawl Survey.
6. **Integration.** The review panel should evaluate the potential for integrating the IBS surveys with NMFS or other inshore trawl surveys or fishery independent monitoring programs. This includes interoperability and comparability of NEFSC current (R/V Albatross IV) and future (R/V Bigelow) bottom trawl surveys and states' near shore trawl survey programs. The panel should also evaluate the potential of integrating fixed fishing gear in the IBS program.
7. **Future of IBS and Other Initiatives.** The review panel should be prepared to make recommendations concerning the continuation of IBS program and development of future fishery independent programs under NCRPP.